

Ergonomics demonstration project: Fastener Distribution

Need

The major operations of most American fastener distribution companies involve importing fasteners from other countries, re-packing them and selling and distributing them in the domestic market. The demonstration project employer, Empire Bolt & Screw, is located in Spokane. It is a typical company in the fastener distribution industry. It would not be required to fully comply with the ergonomics rule until 2005. However, other larger employers who can learn from this company would be required to be in full compliance with the rule by 2004.

Heavy lifting and repetitive high hand force are common in many of the jobs in this industry. Proper job and workstation design, well planned work organization, and good work practices could reduce the hazards and improve work conditions.

Goals

The goals of this demonstration project were to:

- Identify caution zone and hazard zone jobs as defined in the Washington State ergonomics rule.
- Identify engineering and administrative controls to eliminate hazards.
- Identify additional controls that could be used to improve comfort and productivity even though the state ergonomics rule does not require this.

Project design

Empire Bolt and Screw agreed to be a demonstration project site, and to share their methods of musculoskeletal risk reduction with other companies. Department of Labor and Industries ergonomists visited the company to document risk factors associated with typical jobs, and to identify best practices that reduce the risk factors below the hazard zone.

Major activities at Empire Bolt and Screw include:

- Warehouse functions
- Packaging tasks
- Customer service duties

Many of the risk factors listed in the ergonomics rule are present in the different activities of this industry. Examples of these risk factors include handling heavy boxes in warehouse activities, repetitive movements and high hand force in the packaging tasks, and awkward postures in customer service and office activities.

With the emphasis on safe work practices from management and active involvement of employees of Empire Bolt and Screw, this company was able to reduce the hazards related to exposure to these risk factors.

Timetable

February 2000L&I ergonomists visited the company and assessed the jobs.
November 2000Empire Bolt & Screw agreed to be one of the demonstration sites.
November 2000L&I ergonomists conducted a second site visit and looked at some
office jobs.
May 2001.....Completed final report and sent to the company for review.
September 2001Report finalized.

Results

L&I ergonomists assessed the jobs using the ergonomics rule to determine whether any job is in the caution zone or hazard zone. If it was found that a job was not in the hazard zone or caution zone, ergonomists tried to identify what the company did to reduce the hazard. If a job was in the hazard zone, the ergonomists tried to find solutions to improve the job.

A report has been developed based on this visit. The company had implemented numerous solutions to improve heavy lifting tasks, solved repetitive and high hand force problems, and eliminated hazards related to awkward work postures.

The report and photos of the solutions will be displayed on the L&I web site to assist others in eliminating hazards.